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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/511,408	02/23/2000	Toshihiro Sasai	80959	3948

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EXAMINER	
YODER III, CHRISS S	

ART UNIT	PAPER NUMBER
2612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/511,408	Applicant(s) SASAI ET AL.	
	Examiner Chriss S. Yoder, III	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wober et al (US Patent # 5,870,505) in view of Ito (US Patent # 5,644,359).

3. In regard to claim 1, note Wober discloses the use of a camera having an image sensing device (figure 1), generating the desired signal from the image signal (column 2, lines 50-52), the use of a luminance correction section for generating individual correction coefficients from a plurality of coefficients in units of pixels (column 2, lines 43-52), correcting the luminance information based on the correction coefficients (column 2, lines 50-52), and outputting a new image signal (column 2, lines 50-52). Therefore, it can be seen that the Wober device lacks the use of pixels with predetermined color values and analog luminance values. Ito discloses the use of analog luminance values (figure 2). Ito teaches that the use of analog luminance values is preferred in order to reduce processing. Official notice is taken that both the concept and the advantages of pixels with predetermined color values are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Wober device to use pixels with predetermined

color values and analog luminance values in order to separate pixels into specific colors and to reduce processing.

4. In regard to claim 2, note Wober discloses the use of the luminance correction section in series with the image signal in Figure 1.

5. In regard to claim 3, note Wober discloses the use of a correction control section that generates a luminance correction amount corresponding to each pixel based on a clock signal synchronized with the luminance information in the pixel (column 3, lines 50-52), and a luminance correction amplification section would be inherent in order to adjust the pixel based on the input correction amount generated from the luminance correction section and to then output the new image signal (column 2, lines 50-52).

6. In regard to claim 4, note Wober discloses the use of a first correction control section for generating a luminance correction amount (column 2,lines 33-36), a second correction control section for generating a luminance correction amount (column 2, lines 42-45), and using the combination of correction amounts generated in each correction control section to adjust the pixel's luminance and output the new image signal (column 2, lines 50-52).

7. In regard to claim 5, note Wober discloses that the correction coefficients are formed in units of pixels (column 2, lines 42-45), and the correction section selects and used the luminance correction amounts as the correction coefficients in units of pixels (column 2, lines 42-45).

8. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wober et al (US Patent # 5,870,505) in view of Ito (US Patent # 5,644,359) as applied to claim 1 above, and in further view of Sakaguchi (US Patent # 5, 534,916).

9. In regard to claim 6, the primary reference discloses the use of a camera having an image sensing device, generating the desired signal from the image signal, the use of a luminance correction section for generating individual correction coefficients from a plurality of coefficients in units of pixels, correcting the luminance information based on the correction coefficients, outputting a new image signal, pixels with predetermined color values, and analog luminance values. Therefore, it can be seen that the primary reference lacks the use of correction amounts corresponding to coordinate positions defined by two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3). Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens. Therefore, it would have been obvious to one of ordinary skill to modify the primary device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

10. In regard to claim 7, the primary reference discloses the use of a camera having an image sensing device, generating the desired signal from the image signal, the use of a luminance correction section for generating individual correction coefficients from a plurality of coefficients in units of pixels, correcting the luminance information based on

the correction coefficients, outputting a new image signal, pixels with predetermined color values, and analog luminance values. Therefore, it can be seen that the primary reference lacks the use of correction amounts corresponding to coordinate regions defined by two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3). Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens. Therefore, it would have been obvious to one of ordinary skill to modify the primary device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

11. In regard to claim 8, the primary reference discloses the use of a camera having an image sensing device, generating the desired signal from the image signal, the use of a luminance correction section for generating individual correction coefficients from a plurality of coefficients in units of pixels, correcting the luminance information based on the correction coefficients, outputting a new image signal, pixels with predetermined color values, and analog luminance values. Therefore, it can be seen that the primary reference lacks the use of correction amounts representing two correction distribution characteristics changing in axial directions of two coordinate axes that form the two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3), and it is inherent that the correction amounts

represent two correction distribution characteristics changing in axial directions because the correction amount is dependent on the pixel position. Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens. Therefore, it would have been obvious to one of ordinary skill to modify the primary device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

12. In regard to claim 9, the primary reference discloses the use of a camera having an image sensing device, generating the desired signal from the image signal, the use of a luminance correction section for generating individual correction coefficients from a plurality of coefficients in units of pixels, correcting the luminance information based on the correction coefficients, outputting a new image signal, pixels with predetermined color values, and analog luminance values. Therefore, it can be seen that the primary reference lacks the use of correction amounts representing two correction distribution characteristics changing in axial directions of two coordinate axes that form the two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3), it is inherent that the correction amounts represent two correction distribution characteristics changing in axial directions because the correction amount is dependent on the pixel position, and it is implied that if the two correction amounts are dependent on the position on each axis that if the values increased as it moved outward, the sum of the two would increase the correction

amount based on position. Sakaguchi teaches that the use of two-dimensional coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens. Therefore, it would have been obvious to one of ordinary skill to modify the primary device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

13. In regard to claim 10, the primary reference discloses the use of a camera having an image sensing device, generating the desired signal from the image signal, the use of a luminance correction section for generating individual correction coefficients from a plurality of coefficients in units of pixels, correcting the luminance information based on the correction coefficients, outputting a new image signal, pixels with predetermined color values, and analog luminance values. Therefore, it can be seen that the primary reference lacks the use of correction amounts representing two correction distribution characteristics changing in axial directions of two coordinate axes that form the two-dimensional coordinates of the image. Sakaguchi discloses the use of two-dimensional coordinates within the image to generate the correction amount (column 2, lines 58-60; column 3, lines 26-29;and figure 3), it is inherent that the correction amounts represent two correction distribution characteristics changing in axial directions because the correction amount is dependent on the pixel position, and it is implied that if the two correction amounts are dependent on the position on each axis that if the values increased as it moved outward, the product of the two would increase the correction amount based on position. Sakaguchi teaches that the use of two-dimensional

coordinates in order to get correction amounts is preferred in order to correct problems of shading created by the lens. Therefore, it would have been obvious to one of ordinary skill to modify the primary device to use two-dimensional coordinates within the image to generate the correction amount in order to correct problems of shading created by the lens.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US006526181B1: note the use of a color filter on an image sensor.

US005432550A: note the enhancement of luminance values in the corners more than the center of the image.

US005530474A: note the luminance correction.

US005712682A: note the use of image regions for correction.

US005737017A: note the use of color filters and the luminance processing circuitry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (703) 305-0344. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone numbers

for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.

CSY
October 17, 2003

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600